

Title (en)  
SPATIAL AUDIO FOR THREE-DIMENSIONAL DATA SETS

Title (de)  
RÄUMLICHES AUDIO FÜR DREIDIMENSIONALE DATENSÄTZE

Title (fr)  
AUDIO SPATIAL POUR ENSEMBLES DE DONNÉES TRIDIMENSIONNELLES

Publication  
**EP 3622386 B1 20240703 (EN)**

Application  
**EP 18725067 A 20180421**

Priority  
• US 201762503864 P 20170509  
• US 201715812785 A 20171114  
• US 2018028722 W 20180421

Abstract (en)  
[origin: US2018332420A1] A head mounted display (HMD) device is provided that includes a display, a position and orientation sensor, and speakers. The HMD device includes a processor configured to receive map data of a three-dimensional environment, receive a three-dimensional data set, detect a predefined feature in the three-dimensional data set, place a spatial audio emitter anchor in the three-dimensional environment in a location where the feature was detected, the spatial audio emitter having an emitter boundary, determine a current location of a user in the virtual environment based on a signal from the sensor, display the map data of the three-dimensional environment with a graphical representation of the three-dimensional data set based on the determined current location of the user, and responsive to determining that the location of the user is outside of the boundary, play the spatial audio emitter in a spatial audio mode via the near-ear speakers.

IPC 8 full level  
**G06F 3/16** (2006.01); **G06F 3/01** (2006.01); **H04S 7/00** (2006.01)

CPC (source: CN EP US)  
**G06F 3/011** (2013.01 - CN EP); **G06F 3/012** (2013.01 - CN US); **G06F 3/017** (2013.01 - CN EP US); **G06F 3/165** (2013.01 - CN EP US); **G06F 3/167** (2013.01 - CN EP US); **G06T 17/05** (2013.01 - CN US); **G06T 19/003** (2013.01 - CN US); **G06V 20/176** (2022.01 - CN); **G06V 20/182** (2022.01 - CN); **G06V 20/188** (2022.01 - CN); **G06V 20/20** (2022.01 - CN EP US); **H04S 3/002** (2013.01 - CN EP US); **H04S 7/304** (2013.01 - CN EP US); **G06V 20/176** (2022.01 - US); **G06V 20/182** (2022.01 - US); **G06V 20/188** (2022.01 - US); **H04S 2400/11** (2013.01 - CN EP US); **H04S 2400/15** (2013.01 - CN EP US)

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**US 10264380 B2 20190416**; **US 2018332420 A1 20181115**; CN 110651248 A 20200103; CN 110651248 B 20230704;  
CN 116578266 A 20230811; EP 3622386 A1 20200318; EP 3622386 B1 20240703; US 10708704 B2 20200707; US 2019239014 A1 20190801;  
WO 2018208466 A1 20181115

DOCDB simple family (application)  
**US 201715812785 A 20171114**; CN 201880030671 A 20180421; CN 202310741594 A 20180421; EP 18725067 A 20180421;  
US 2018028722 W 20180421; US 201916378867 A 20190409